

**WELCOME TO  
PUNJAB  
INDIA**

**11<sup>th</sup> Nov 2020**

**INDIA KOREA BUSINESS FORUM  
Electronics Sector**

# INDIA: SNAPSHOT OF IT & ESDM ECOSYSTEM

## IT/ITeS

Share in GDP  
**8%**

Share in services export  
**45%**

Share in global outsourcing market **56%**

**FDI USD 6 billion**  
(2017-18)  
(2<sup>nd</sup> largest sector in FDI inflows)

Employment  
**4 million**  
(FY 2017-18)

## ESDM

The Indian electronics hardware market is one of the largest in the world and is expected to reach **USD 400bn in 2025 from USD 59 bn in (2017-18)**

**FDI USD 452 Mn**  
(2018-19) up from USD 197 Mn (2017-18)

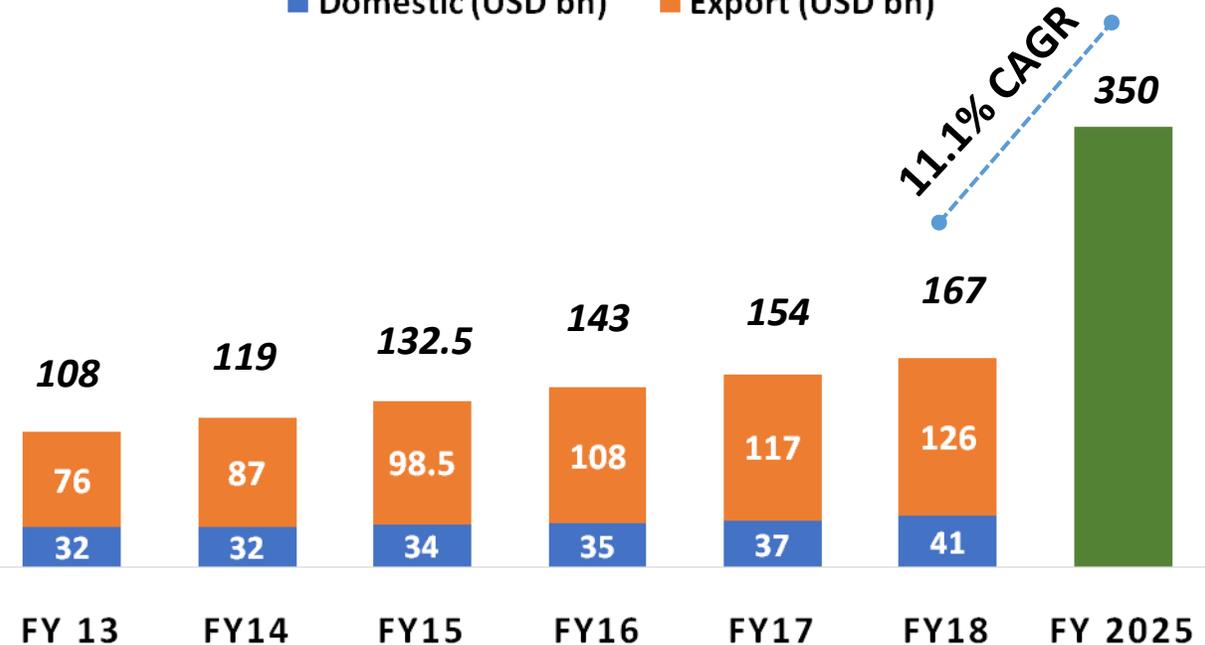
Share in GDP  
2.3%

CAGR 26.7%

The market size of IT/ITeS is expected to grow to **USD 350 bn by 2025**

### INDIA IT/ITES INDUSTRY REVENUE (USD BN)

■ Domestic (USD bn) ■ Export (USD bn)



•1 USD=70 INR

# DRIVER'S OF INDIA'S ESDM SECTOR

## Growing Demand

- India poised to be 3<sup>rd</sup> largest consumer economy in the world
- 2<sup>nd</sup> largest digital base in the world
- Increasing per capita income
- Expected growth from Tier 2 & 3 cities
- Huge demand for electronic goods in emerging markets

## Infrastructure

- Under Electronics Manufacturing Cluster Scheme- 20 greenfield EMCs and 3 brownfield EMCs being set up
- ESDM Incubators being set up by MeITY and Centres of Excellence in cutting edge electronic design

## Human Capital

- Setting up of **Electronics Sector Skill Council**
- Financial Assistance to States/UTs for skill development in EDSM, to train 90,000 candidates

## Policy

- 100% FDI permitted allowed under the automatic route
- National Policy on Electronics (NPE) 2019
  - Focus on emerging technologies as 5G, IOT, AI, Robotics
  - Sovereign Patent Fund for development & acquisition of IP
  - Special package for export promotion, incentives for core component manufacturing ecosystem, high capital intensive projects
- Electronic Development Fund for startup & innovation

# IT/ ITeS SECTOR IN PUNJAB

## Strong Ecosystem

Presence of 250+ registered IT units

Approximately 35,000 IT professionals in the region

Higher cost savings of 9-14 % over tier 1 cities

Exports from the region amounting to KRW 660 Bn or USD 0.6 Bn

Presence of firms such as **Xenon Stack, Zini AI, Endoenergy Systems Private Limited** in emerging technologies such **Big data, AI, Machine Learning, DevOps Consulting, Data Warehousing, XD Design Studio, Preventive & Assistive Technology for Healthcare**

## Top countries for IT/ITeS Exports



USA



Norway



Canada



Australia

## Top IT/ITeS Companies

Infosys®

EVRY

FIS

zscaler

parexel®

Teleperformance  
each interaction matters

BUNGE

EMERSON



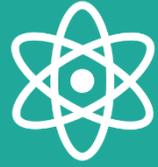
Quark edifecs

# ESDM SECTOR IN PUNJAB



India's only **ASIC Fabrication Plant**

**Punjab**  
“Aiding  
International  
Research &  
Technology  
Projects”



SCL supplied more than 100,000 units of Multiplexed Analog Signal Processor (MANAS) ASIC for use in high energy physics experiments (ALICE) at Large Hadron Collider, **CERN- Geneva**



SCL Developed two kinds of **Low Drop Out Regulators (LDOs)** for use in fabrication of equipment on-board spacecraft rocket **Chandrayaan-2**

## Major ESDM Companies & Research Institutes in Punjab



MOU between SCL and STPI for a Centre of Excellence in Microelectronics/ASIC Design.

# ESDM ECOSYSTEM IN REGION

## Semi-Conductor Lab



Semiconductor Laboratory

1. SCL is engaged in research and development of Microelectronics
2. The country's only CMOS fabrication facility (Fab)
3. Designed over 150 ASIC/ Standard Blocks in last 5 years meeting ISRO's requirements

## Electronics



1. BEL is a manufacturer of diversified product portfolio ranging from defence focused state-of-the-art equipment to civil products such as electronic voting machine, tablet PC, solar power traffic signal system etc.
2. Caters to domestic as well as international customers across countries such as Japan, Germany, France, USA, UK and Vietnam

## Research & Development



1. C-DAC, Mohali is a premier R&D organization set-up to train manpower in electronic design & technology
2. Product and services include high performance computing, grid and cloud computing, cyber security and forensics, multilingual & heritage computing

## Electronics



1. CDIL is a renowned semiconductor manufacturer of silicon chips and devices with state-of-the-art equipment
2. It has a sales and distribution network in over 35 countries

# ESDM ECOSYSTEM IN REGION

## Telecom



1. Punjab Communication Ltd is a Telecom and IT equipment solution provider
2. Product range covers voice/data, multiplexers, power line carriers, broadband equipment and services etc.
3. ISO 9001:2000 certified company with state of the art SMT manufacturing facility

## Ordinance Cable Factory



Ordinance  
Cable Factory

1. Ordinance cable factory, established in collaboration with SUMITOMO Japan, 1963
2. Product portfolio includes Carrier Quad Table, Spring Steel Wires Air Field, Filled Cable Assemblies for T-72 & BMP-I

## Testing & Development Centre

**ETDC**

1. ETDC, Mohali is leading laboratory engaged in providing Accredited Calibration and Testing Facilities
2. Serves small and medium scale electronic industries

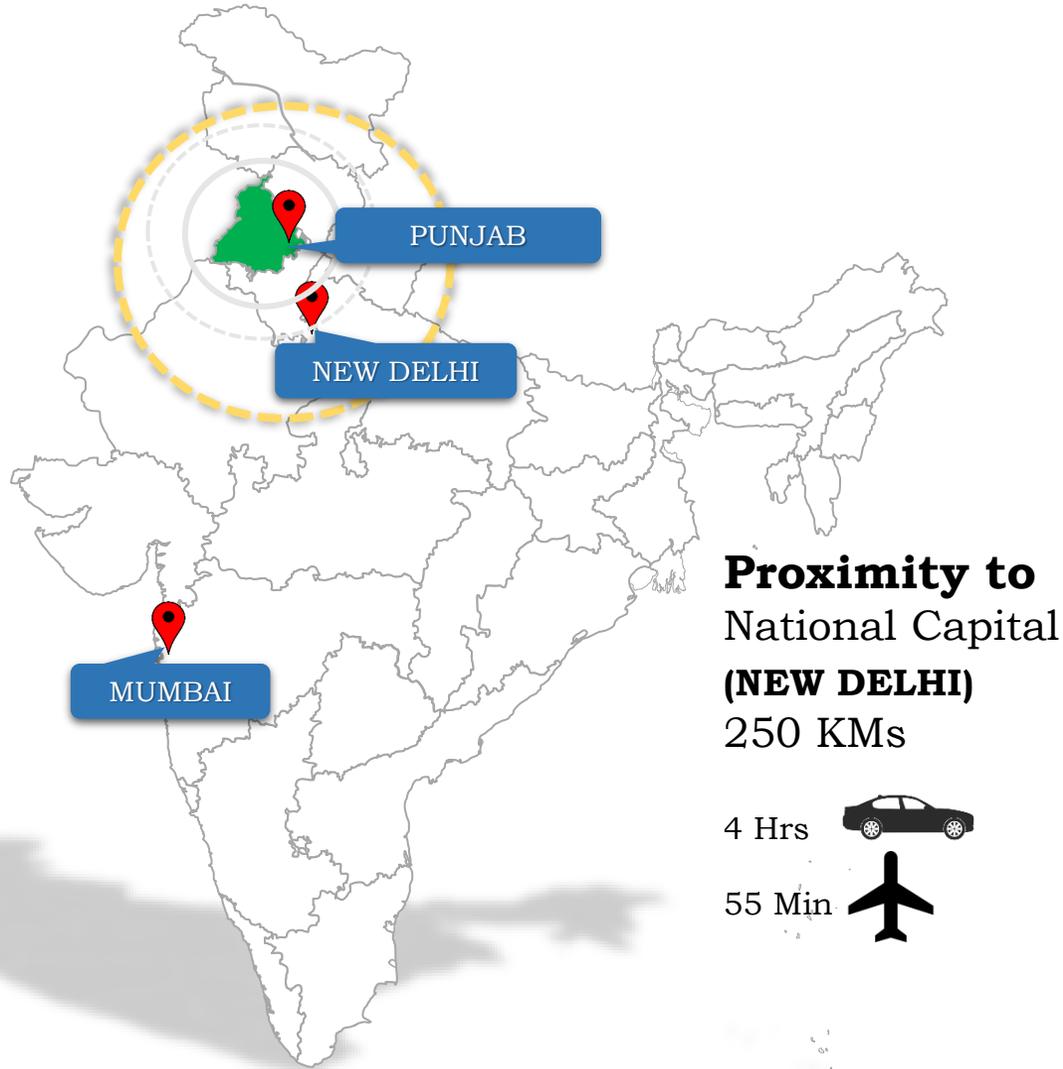
## CSIO



1. CSIO is a premier national laboratory dedicated to R&D and design of scientific and industrial instruments
2. Offers R&D facilities in areas like medical instrumentation, optics, cockpit bases instrumentation, transducers etc.

# THINK PROGRESS - THINK PUNJAB

## STRATEGICALLY LOCATED



## VIBRANT ECONOMY

With **1.5%** of India's land area, contributes **3%** to India's GDP

### FOOD BOWL OF INDIA

25% Rice & 35% Wheat share in Central Grain Pool

### TRACTORS

India's largest Tractor manufacturing State. Accounts for 22% export from India

### BICYCLE

Leading State in Bicycle (75%) & Bicycle components (92%) Manufacturing

### TEXTILE

Biggest Hosiery / Woolen (65%) Manufacturing State

# COMPETITIVE FACTORS OF PRODUCTION



## ELECTRICITY

### Affordable Quality Power

- **80 KRW/ unit** (variable tariff)
- **Electricity Surplus** State- No Shortage even during peak demand
- Low Transmission Losses



## WORKFORCE

### Peaceful Labour

- **No major strike** in last 3 decades
- **No domicile** restriction in hiring
- **24X7 shifts** across gender
- Competitive wages @ ~150,000 KRW/ month



## LOGISTICS

### Ranked 2<sup>nd</sup> in Ease of Logistics

- **1st** in Safety/ Security of Cargo Movement
- **5** Inland Container Depots & **3** multi-modal logistics park
- **2** International & **4** Domestic Airports
- **2<sup>nd</sup> Highest rail density**
- Connected to **dedicated freight corridors**



## DIGITAL INFRASTRUCTURE

### Ranked 2<sup>nd</sup> in Tele-Density (%)

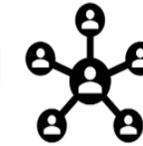
- **1<sup>st</sup> in India** (No. of Internet subscriber/ 100 population)
- In **top 5 states** in optical fiber net connectivity
- **4G connectivity** across the State

# SKILLED HUMAN CAPITAL

Particulars	No. Of Institutes	Total Annual Graduates
Engineering	89	45,013
Polytechnics	204	66,495
ITIs	344	70,000



6000+ graduates in IT and allied fields



8000+ students trained in ESDM / IT

## Premium Institutes



IIT, Ropar  
Indo-Taiwan Joint  
Research Centre on AI and  
ML, IIT Ropar

Indian Institute of  
Management Amritsar



Punjab Technical  
University



NIT Jalandhar



S.A.S. Nagar



THAPAR INSTITUTE  
OF ENGINEERING & TECHNOLOGY  
(Deemed to be University)



LOVELY  
PROFESSIONAL  
UNIVERSITY



CHITKARA  
UNIVERSITY  
PUNJAB

Annual Pass Outs 0.86 Mn

Doctors

2,400

Post  
Graduates

0.1 mn

Graduates

0.6 mn

Technical Certifications (ITIs)

0.14 mn

MBA

6,600

Engineers

20,000

Focus on New Skills

AI, Robotics, Mechatronics, Computer aided engineering, 3D modelling, programmable logic control, process knowledge, data analytics etc.

# UNMATCHED STATE FISCAL INCENTIVES

## Anchor Unit



**ESDM sector** has been identified as a thrust sector

## FISCAL INCENTIVES

- ▶ Net GST reimbursement for 15 years upto 200% of FCI
- ▶ Employment Generation subsidy of up to 765,100 KRW/ employee/ year for 5 yrs
- ▶ 100% Exemption from CLU/EDC charges
- ▶ 100% Exemption from Electricity Duty for 15 yrs
- ▶ Up to 100% Exemption/ Reimbursement from Stamp Duty on purchase or lease of land and building
- ▶ Property Tax Exemption up to 100% for 10 years

# INVESTMENT FACILITATION



**UNIFIED REGULATOR**



**INVESTMENT PROMOTION AGENCY**



**DEDICATED RELATIONSHIP OFFICER**



**DIGITAL APPROVALS**

**INVESTMENT PROMOTION**

**FISCAL INCENTIVE APPROVALS**

**ONE STOP OFFICE  
ONE OF ITS KIND IN INDIA**

**REGULATORY CLEARANCES**

**INVESTMENT FACILITATION**

**Investors are supported throughout their business lifecycle**

**1 EXPLORATION**

**2 STARTING A BUSINESS**

**3 SETTING UP A BUSINESS**

**4 OPERATING A BUSINESS**

# INVESTMENT OPPORTUNITIES



Semi-Conductor  
Wafer Fab



Electronics  
/ASIC  
Designing



3 D Printing



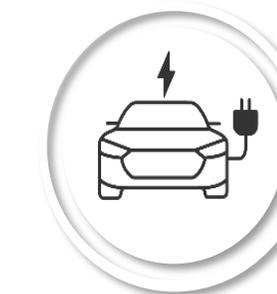
Mobile &  
Components



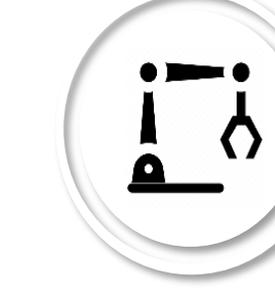
Consumer  
Electronics



Aerospace &  
Defence  
Electronics



Automobile  
Electronics



Industrial  
Electronics



Medical  
Electronics

# INVESTMENT OPPORTUNITIES

## ESDM PARK

ESDM Park (Proposed) in 200 Acres with Plug & Play infrastructure to promote Electronics Manufacturing in the State

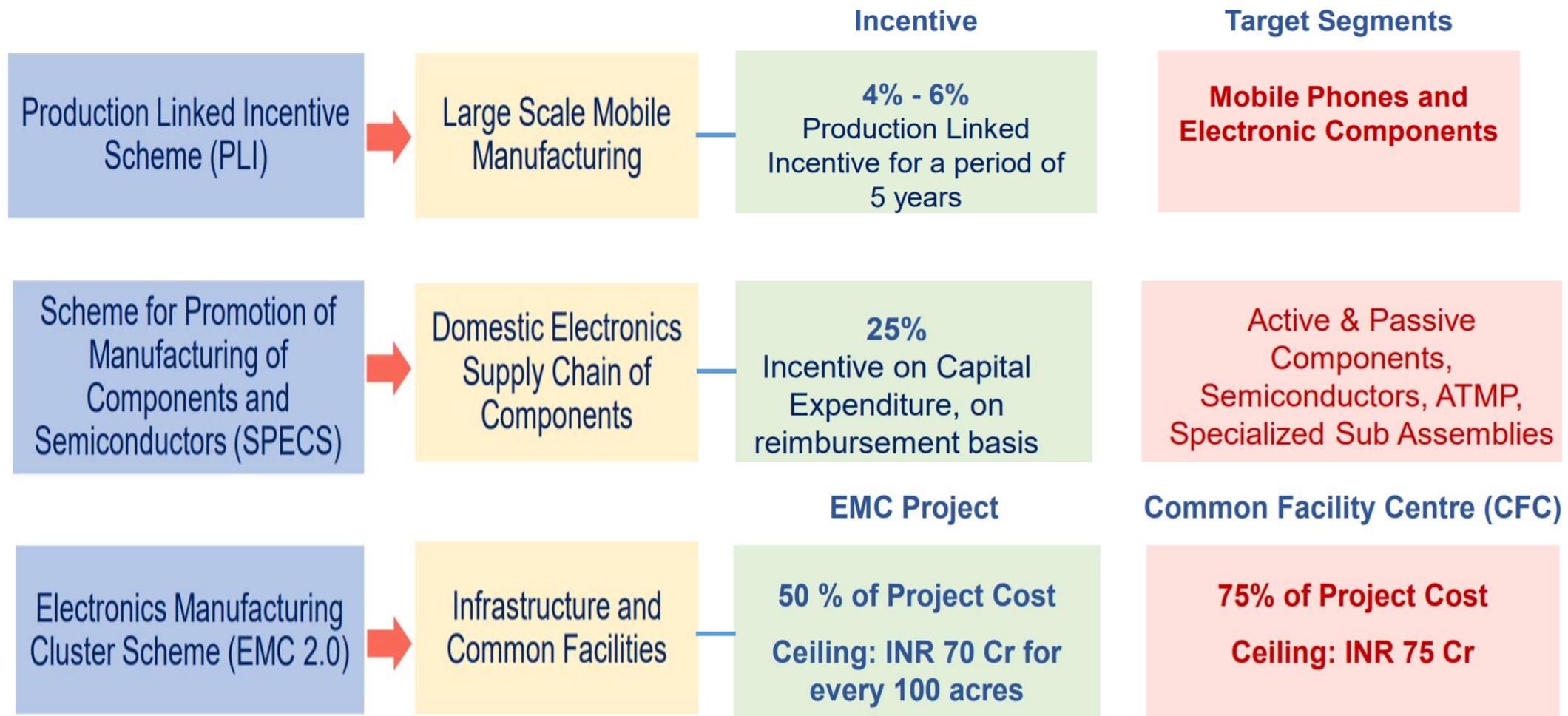
Strong Industrial Ecosystem- Home to India's only Fab manufacturing(SCL) engaged in the design & development of VLSIs, ASICS, FPGA's etc., Supported by Research Institutions, Electronics Testing Lab (ETDC), Upcoming Centre of Excellence CoE in Microelectronics/ ASICS design

World class infrastructure along with common facilities and amenities, including Ready Built Factory (RBF) sheds / Plug and Play facilities for attracting major global electronics manufacturers along with their supply chain to set up units

Common Facility Centres- Training Facility, Tool Rooms, Testing & Certification Labs, CAD/CAM Centre, Prototyping Centre, Incubation Centre

Attractive Incentives for Anchor Units

# GOI INCENTIVE SCHEMES FOR ELECTRONICS



**\*Ceiling USD 9.4 Mn for 100 acres EMC Project & USD 10 Mn for CFC**  
 Large Manufacturing Clusters (Min land area 200+ acres , Anchor Units (Commitment: 20% Land Area, USD 40 Mn+ Investment), Plug & Play Infrastructure, Common Facility Centres, Project Implementation Agency – State Implementing Agency

\*Source: Ministry of Electronics and Information Technology (<https://www.meity.gov.in/content/meity-electronics-schemes>)

# QUALITY OF LIFE

Ranked 2<sup>nd</sup> amongst all States & UTs in first ever annual India Happiness Report 2020



## Modern Health Infrastructure

- Ranks 2<sup>nd</sup> in National Health Index
- Home to **leading health institutions** such as PGI, Fortis, Max, Apollo



## Peaceful Environment

- **Abundant green spaces** around settlements
- **Higher air quality** than Delhi NCR

### Leisure Spaces



### Hotels



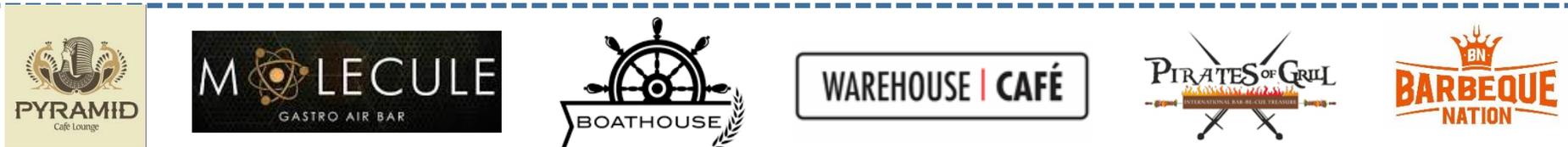
### Hospitals



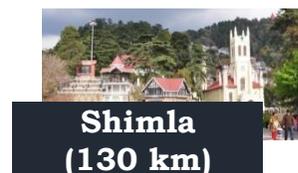
### Schools



### NIGHT LIFE



### WEEKEND GETAWAYS



**WELCOME**



**PUNJAB**



**THANK YOU**

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